

6AU8A

Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE

With Heater Having Controlled Warm-Up Time

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

| | | |
|---------------------------------|----------|-------|
| Voltage (AC or DC) | 6.3 | volts |
| Current | 0.6 ± 6% | amp |
| Warm-up time (Average). | 11 | sec |

Direct Interelectrode Capacitances:^a

Triode Unit:

| | | |
|---------------------------------------|------|-----|
| Grid to plate | 2.2 | μμf |
| Grid to cathode and heater. | 2.6 | μμf |
| Plate to cathode and heater | 0.34 | μμf |

Pentode Unit:

| | | |
|--|------------|-----|
| Grid No.1 to plate. | 0.06 | μμf |
| Grid No.1 to cathode & internal shield & grid No.3, grid No.2, and heater. | 7.5 | μμf |
| Plate to cathode & internal shield & grid No.3, grid No.2, and heater. | 3.4 | μμf |
| Triode grid to pentode plate. | 0.022 max. | μμf |
| Pentode grid No.1 to triode plate | 0.006 max. | μμf |
| Pentode plate to triode plate | 0.12 max. | μμf |

Characteristics, Class A₁ Amplifier:

| | Triode Unit | Pentode Unit | |
|--|----------------|-----------------|-------------|
| Plate Supply Voltage. | 150 | 40 | 200 volts |
| Grid-No.2 Supply Voltage. | — | 125 | 125 volts |
| Cathode Resistor. | 150 | — | 82 ohms |
| Amplification Factor. | 43 | — | — |
| Plate Resistance (Approx.). | 8100 | — | 100000 ohms |
| Transconductance. | 5300 | — | 8000 μmhos |
| Plate Current | 9.5 | 28 ^b | 17 ma |
| Grid-No.2 Current | — | 10 ^b | 3.4 ma |
| Grid-No.1 Voltage (Approx.) for plate μa = 100. | -6.5 | — | -7.5 volts |

Mechanical:

| | |
|---|---|
| Operating Position. | Any |
| Maximum Overall Length. | 2-5/8" |
| Maximum Seated Length | 2-3/8" |
| Length, Base Seat to Bulb Top (Excluding tip) | 2" ± 3/32" |
| Diameter. | 0.750" to 0.875" |
| Dimensional Outline | See General Section |
| Bulb. | T6-1/2 |
| Base. | Small-Button Noval 9-Pin (JEDEC No. E9-1) |



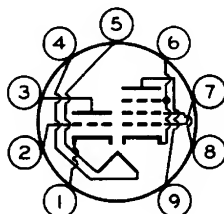
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DATA 1
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Basing Designation for BOTTOM VIEW. 9DX

Pin 1—Triode
Cathode
Pin 2—Triode
Grid
Pin 3—Triode
Plate
Pin 4—Heater
Pin 5—Heater



Pin 6—Pentode
Cathode,
Grid No.3,
Internal
Shield
Pin 7—Pentode
Grid No.1
Pin 8—Pentode
Grid No.2
Pin 9—Pentode
Plate

AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

| | Triode Unit | Pentode Unit | |
|--|-----------------------|-----------------------|-------|
| PLATE VOLTAGE | 330 max. | 330 max. | volts |
| GRID-No.2 (SCREEN-GRID) | | | |
| SUPPLY VOLTAGE. | — | 330 max. | volts |
| GRID-No.2 VOLTAGE | — | See Grid-No.2 Input | |
| <i>Rating Chart at front of Receiving Tube Section</i> | | | |
| GRID-No.1 (CONTROL-GRID) | | | |
| VOLTAGE: | | | |
| Positive-bias value | 0 max. | 0 max. | volts |
| GRID-No.2 INPUT: | | | |
| For grid-No.2 voltages | | | |
| up to 165 volts | — | 1 max. | watt |
| For grid-No.2 voltages be- | | | |
| tween 165 and 330 volts | — | See Grid-No.2 Input | |
| <i>Rating Chart at front of Receiving Tube Section</i> | | | |
| PLATE DISSIPATION | 2.8 max. | 3.3 max. | watts |
| PEAK HEATER-CATHODE VOLTAGE: | | | |
| Heater negative with | | | |
| respect to cathode. | 200 max. | 200 max. | volts |
| Heater positive with | | | |
| respect to cathode. | 200 ^c max. | 200 ^c max. | volts |

Maximum Circuit Values:

| | Triode Unit | Pentode Unit | |
|-------------------------------|----------------|-----------------|--------|
| Grid-No.1—Circuit Resistance: | | | |
| For fixed-bias operation. . . | 0.5 max. | 0.25 max. | megohm |
| For cathode-bias operation. . | 1 max. | 1 max. | megohm |

OPERATING CONSIDERATIONS

Because the *internal shield* is connected to the cathode and grid No.3, the impedance in the cathode circuit should be kept as low as possible to minimize cross-coupling effects.

^a Without external shield.

^b This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

^c The dc component must not exceed 100 volts.

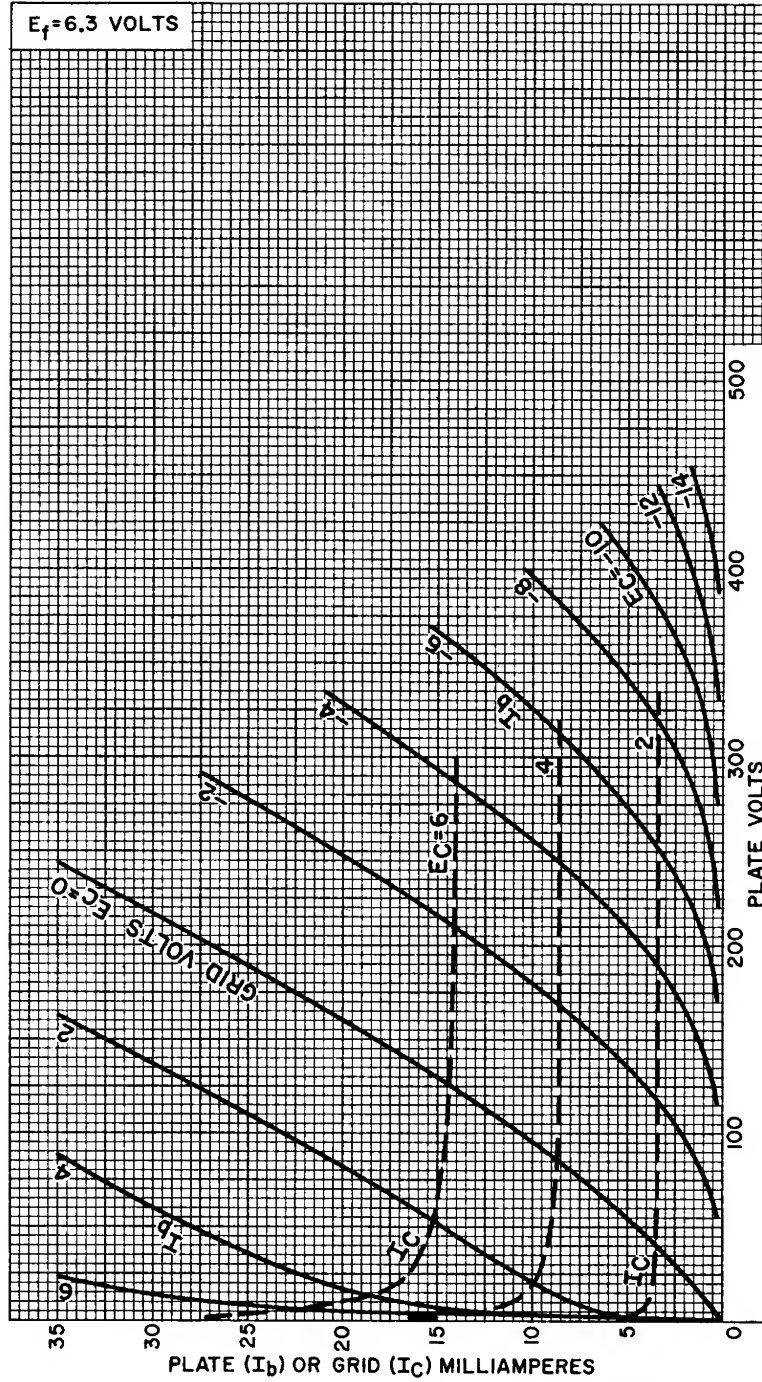
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AVERAGE CHARACTERISTICS Triode Unit



92CM-11140

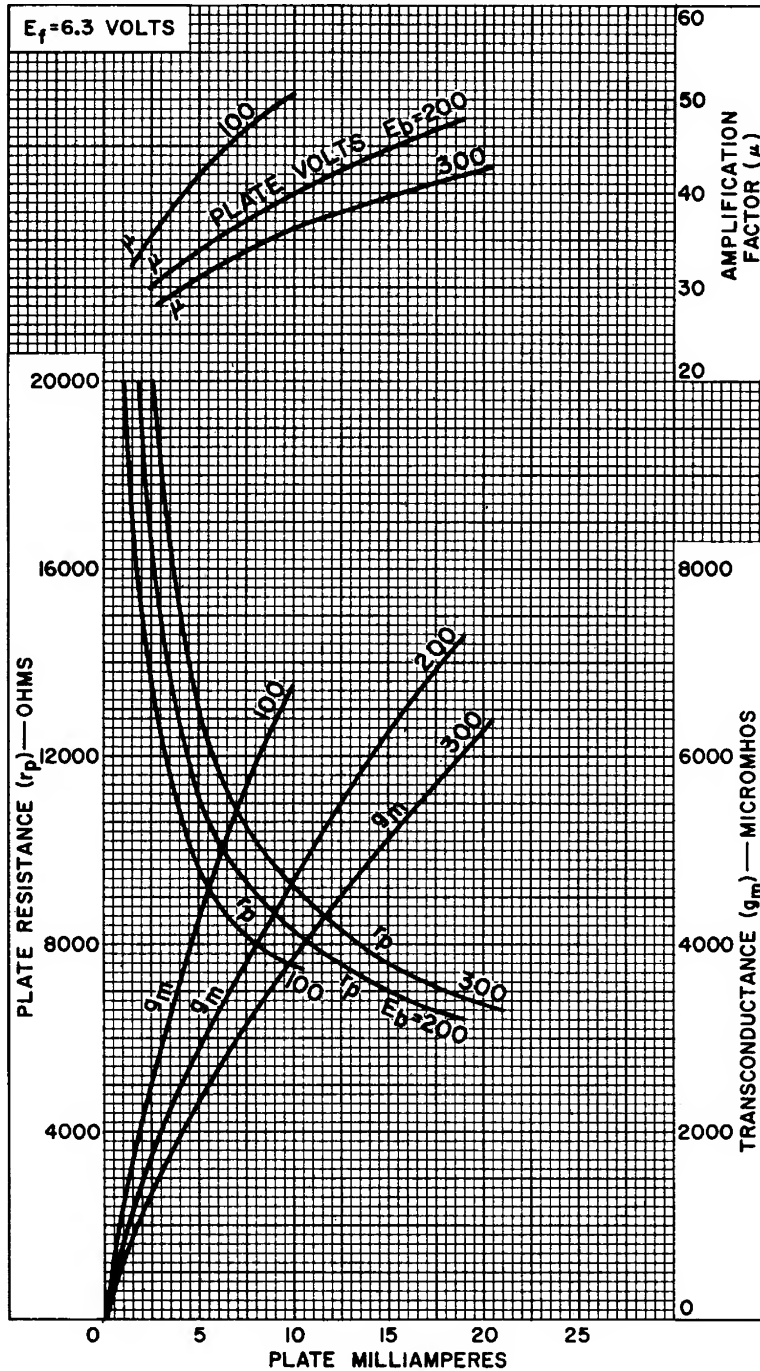


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DATA 2
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AVERAGE CHARACTERISTICS Triode Unit



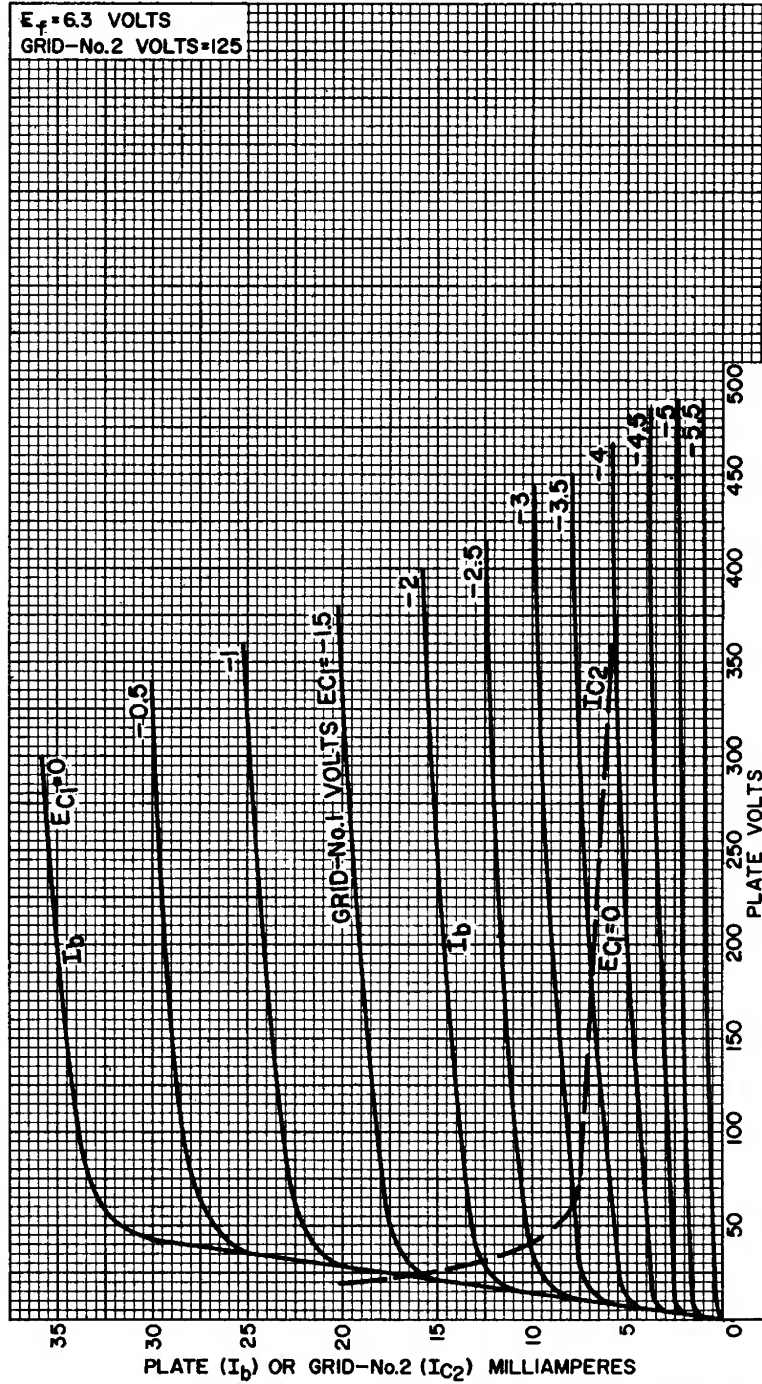
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AVERAGE CHARACTERISTICS Pentode Unit



92CM-11141

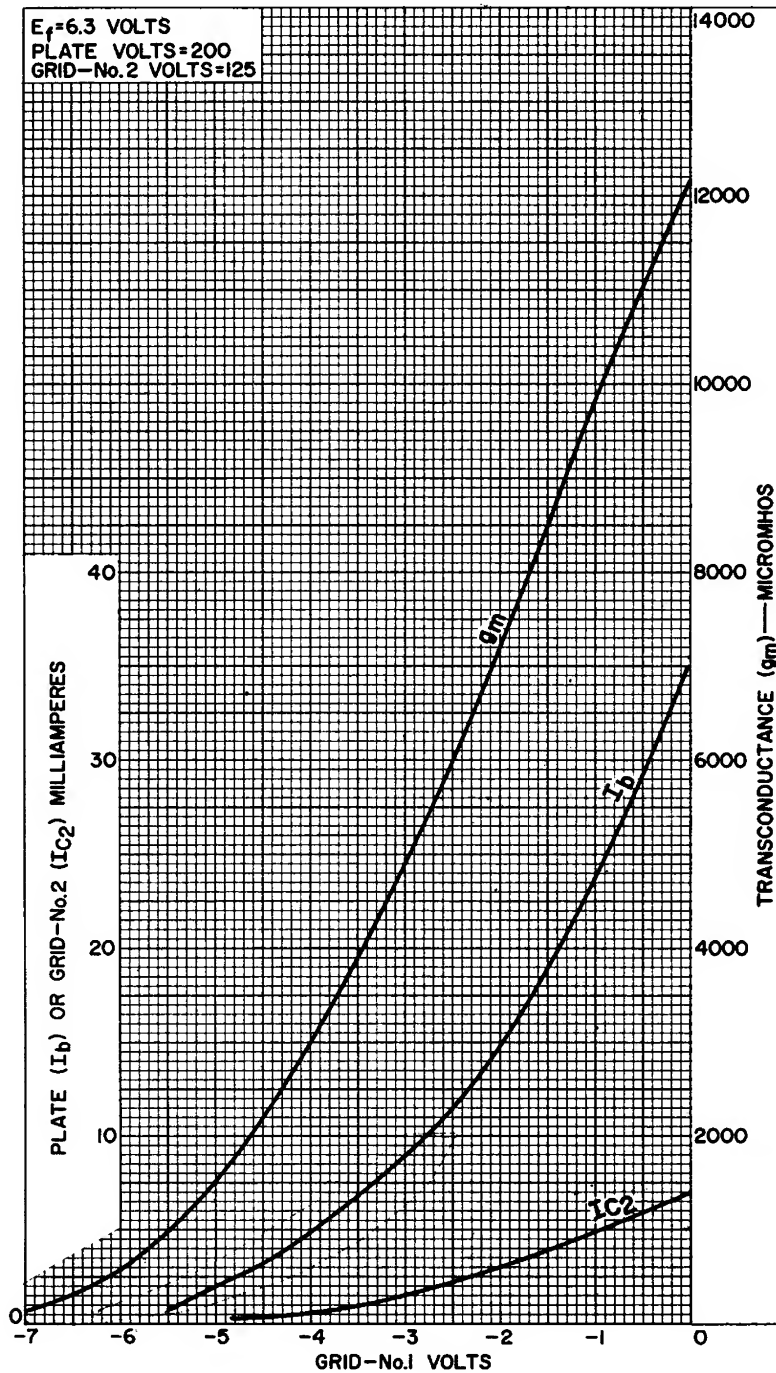


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DATA 3
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AVERAGE CHARACTERISTICS Pentode Unit



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